



Mississippi Department of Marine Resources (MDMR)

Mississippi Marine Biotoxin Plan

For All Marine and Estuarine Shellfish Growing Areas

October 1, 2010

A. Emergency Shellfish Sampling And Assay Program

- a) Mississippi Department of Marine Resources (MDMR) personnel will collect routine water samples approximately twice per month when the areas are opened to harvest or prior to opening by boat throughout the season from indicator stations, to be assayed for the presence of toxic algal blooms by MDMR, Gulf Coast Research Laboratory (GCRL), Alabama Department of Public Health (ADOPH), or other appropriate personnel.
- b) MDMR personnel will make field observations by boat during routine water sampling trips of shellfish growing areas. Areas of discolored water suspected to be from a bloom of dinoflagellate phytoplankton will be noted and GPS coordinates recorded.
- c) Reports to the MDMR of marine biotoxins being detected in the adjacent waters of bordering states will intensify monitoring efforts.
- d) Over flights of Mississippi's shellfish growing areas may be conducted as deemed necessary. Flight paths will include as many active reef areas as possible. MDMR personnel will conduct all flight observations.
- e) Areas of discolored water suspected to be from blooms of dinoflagellate phytoplankton will be noted and GPS coordinates recorded.
- f) MDMR personnel will investigate possible dinoflagellate phytoplankton blooms reported by other reliable sources.
- g) MDMR or other appropriate personnel will investigate indications of a potential bloom by collecting water samples for analysis where deemed appropriate.
- h) MDMR, GCRL, ADOPH or other appropriate personnel will make identifications and cell counts per liter where appropriate.
- i) The harmful algal bloom (HAB) sample stations are (See Figure 1):
 - i. W/S 2-14 – (GPS 30°17.097'N / 89°14.227'W)
 - ii. W/S 2-15B – (GPS 30°11.786'N / 89°13.516'W)
- j) Additional phytoplankton water samples may be conducted periodically at the following locations (See Figure 2):
 - i. Area 1 – W/S 1-7
 - ii. Area 2 – W/S 2-14C and 2-15B
 - iii. Area 3 – W/S 3-7
 - iv. Area 4 – W/S 4-2B, 4-8 and 4-9
 - v. Area 5 – W/S 5-11
 - vi. Area 6 – W/S 6-10 and 6-15
 - vii. Area 7 – W/S 7-2 and 7-3
 - viii. Area 8 – W/S 8-14

B. Close Growing Areas And Embargo Shellfish

- a) Identification of the dinoflagellate *Karenia brevis* (*Gymnodinium breve*) in water column exceeding 5,000 organisms per liter will immediately trigger a closure of

- affected shellfish-growing areas in Mississippi. Oyster areas that are affected will remain closed to harvest until concentrations drop below 5,000 cells per liter.
- b) Identification of plankton as one of the dinoflagellates *Prorocentrum minimum*, *Gonyaulax monilata* (*Alexandrium monilatum*), or the blue-green algae *Oscillatoria erythraea* will warrant no special actions regarding shellfish.
 - c) In the event that unknown biotoxin-producing organisms are encountered, technical assistance from the Food and Drug Administration (FDA) and others will be sought in determining closing and re-opening criteria.
 - d) Shellfish-growing waters will be closed immediately and harvested contaminated shellfish shall be returned to the waters upon the presence of marine biotoxin-producing organisms in numbers sufficient to cause a health risk.
 - e) Authority to close waters or embargo shellfish rests in:
 - i. Mississippi Code of 1972, § 49-15-3. Definitions.
 - 1. “(e) "Illegal oysters" means:”
 - a. “(i) All untagged shell stock;”
 - b. “(ii) Shell oysters obtained from uncertified shops or dealers or from an unlicensed catcher;”
 - c. “(iii) Oysters obtained from waters not declared safe and sanitary by the department, except those oysters caught by the commission for re-laying or under private leases pursuant to Section 49-15-27;”
 - d. “(iv) Shucked oysters obtained from uncertified shops or repackers.”
 - ii. Mississippi Code of 1972, § 49-15-15. Powers and duties of commission.
 - 1. (1)(a) “To exercise full jurisdiction and authority over all marine aquatic life and to regulate any matters pertaining to seafood, including cultivated seafood;”
 - 2. (1)(b) “To adopt, promulgate, amend or repeal, after due notice and public hearing, in accordance with the Mississippi Administrative Procedures Law and subject to the limitations in subsection (2) of this section, rules and regulations authorized under this chapter, including, but not limited to, rules and regulations necessary for the protection, conservation or propagation of all seafood in the waters under the territorial jurisdiction of the State of Mississippi...”
 - 3. (1)(n) “To develop a resource management plan to preserve seafood resources and to ensure a safe supply of these resources.”
 - iii. Mississippi Code of 1972, § 49-15-21 (2.) – “...The enforcement officers may seize at any time aquatic life caught, taken or transported in a manner contrary to the laws of this state, and may confiscate and dispose of the same. ...”
 - iv. Mississippi Code of 1972, § 49-15-36 (3) – “... The department may limit the sale of oysters for human consumption...”
 - v. Mississippi Code of 1972, § 49-15-44. Sale or possession of illegal oysters prohibited; penalties. - “The commission shall prohibit the sale or possession of illegal oysters. It is unlawful for any person, firm or corporation to possess or to engage in the sale of oysters not certified in this state, or to shuck or repack for sale any illegal oysters, unless that person, firm or corporation

possesses a bill of sale, valid permit or affidavit of another state, properly dated, evidencing the legality of the sale or possession of the oysters in that state. Any person in possession of illegal oysters shall be subject to civil or criminal prosecution and shall be fined not less than One Hundred Dollars (\$100.00) or punished as provided in Section 49-15-63.”

vi. TITLE 22 PART 1

1. Chapter 08 Shellfish Area Openings and Closings

- a. 102 – “If closure is necessitated by any other polluting event, which threatens imminent peril to public health, closure will be immediate and any oysters or other shellfish taken which have been subjected to such pollution as determined by the MDMR shall be returned to the water.”

2. Chapter 12 Adulterated, Misbranded, or Unlabeled Shellfish and Products

- a. 100 – “It shall be unlawful for any person within the state of Mississippi to produce, harvest, provide, purchase, sell, offer, possess, or expose for sale, or have in possession with intent to sell, any raw shellfish and shellfish products which are adulterated, misbranded, or unlabeled and no person shall hold or pack shellfish under conditions whereby the shellfish may become adulterated.”
- b. 100.01 – “Any adulterated, misbranded, mislabeled, or unlabeled shellfish or shellfish products may be impounded by the direction of the MCMR or as hereby authorized the MDMR, its Executive Director, Director of Marine Fisheries, the Program Coordinator or other MDMR designee in charge of molluscan shellfish handling and processing, or Marine Patrol Officer.”
- c. 100.02 – “Seizure and disposal of such shellfish products shall be by the direction of the MCMR, or as hereby authorized the MDMR, its Executive Director or Marine Patrol Officer.”

3. Chapter 21 Penalties

- a. 103 – “Any person in possession of shellfish in violation of any chapter of this Part shall be subject to confiscation and disposal of such shellfish by direction of any designated Marine Patrol Officer of the MDMR.”

C. Prevent Harvesting of Contaminated Species.

- a) The harvest of shellfish contaminated by the presence of marine biotoxin-producing organisms in numbers sufficient to cause a health risk will be prevented by the resulting closure of affected waters.

D. Provide For Product Recall.

- a) Title 22, Part 1, Chapter 08 Shellfish Area Openings and Closings, 102 – “If closure is necessitated by any other polluting event, which threatens imminent peril to public health, closure will be immediate and any oysters or other shellfish taken which have been subjected to such pollution as determined by the MDMR shall be returned to the water.”

- E. The MDMR will immediately disseminate information on the occurrences of toxic algal blooms and/or toxicity in shellfish meats to adjacent states, the shellfish industry, and local health agencies by the most appropriate effective communication means available.
- F. The MDMR will coordinate control actions taken by other state or federal agencies involved.

Mississippi Department of Marine Resources – Shellfish Bureau
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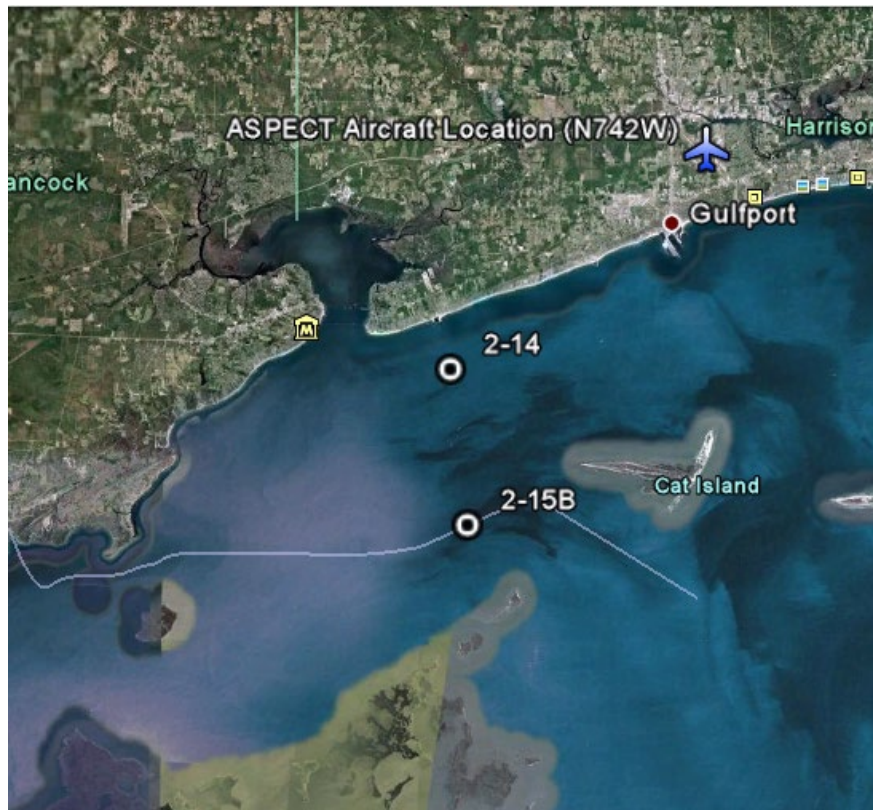


Figure 1: Map of HAB sampling stations

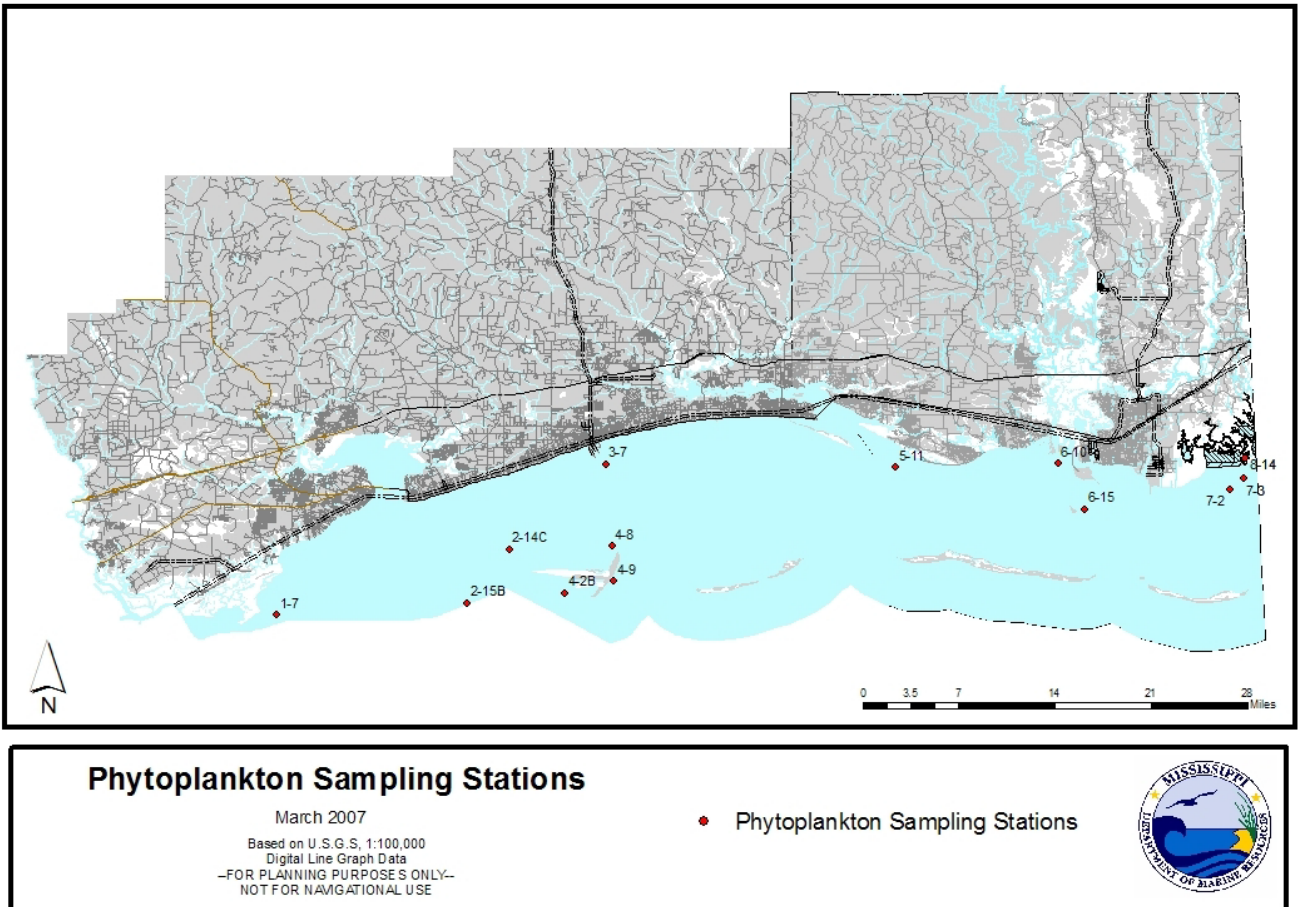


Figure 2: Additional Phytoplankton Sampling Stations